

## Seabrook 1

### 1Q/2003 Plant Inspection Findings

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#### Initiating Events

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#### Mitigating Systems

**Significance:**  Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

##### **Failure to Take Appropriate Action to Correct or Address a Deficiency in Accordance With Operations Procedures Resulting in Inoperability of the Motor Driven Emergency Feedwater Pump**

Green. The inspectors identified a Non-Cited Violation of Technical Specification 6.7.1.a, "Procedures and Programs," in that operators failed to take appropriate action to correct or address a deficiency (indications of an oil leak) which resulted in the inoperability of the motor driven emergency feedwater (MDEFW) pump. The finding was considered more than minor since the MDEFW pump availability was impacted. The finding was determined to be of very low safety significance (Green) since the total unavailability time was less than the allowed outage time in the Technical Specifications. Because the finding is of very low safety significance and the finding was captured in Seabrook's corrective action program, this finding is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the NRC Enforcement Policy.

Inspection Report# : [2003002\(pdf\)](#)

**Significance:**  Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

##### **Failure to Recognize and Correct the Effects of Seat Leakage Past the Steam Supply Valves to the Turbine Driven Emergency Feedwater Pump**

Green. The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI "Corrective Action," in that corrective actions taken were not adequate in recognizing and correcting the effects of a long-standing turbine driven emergency feedwater (TDEFW) pump steam supply valves leakage. The inadequate compensatory corrective actions for this degraded condition resulted in a frozen section of the steam trap discharge piping rendering the steam trap inoperable in February 2003. The finding was considered more than minor because the inoperable steam trap challenged the operability of the TDEFW pump and could have affected the availability and reliability of the pump. The finding was determined to be of very low safety significance (Green) since the frozen steam trap discharge piping did not result in an actual failure of the TDEFW pump. Because the finding is of very low safety significance and the finding was captured in Seabrook's corrective action program, this finding is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the NRC Enforcement Policy.

Inspection Report# : [2003002\(pdf\)](#)

**Significance:**  Feb 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Test the Function of the Charging Pumps' Main Lube Oil Pumps**

The inspectors identified the licensee had not established a procedure to test or monitor the actual performance of the main lube oil pumps for the centrifugal charging pumps (high head injection pumps). Such proceduralized verification that the non safety-related auxiliary lube oil pump shuts down and the main lube oil pump provides adequate oil flow during charging pump operation ensures that the safety-related main lube oil pumps would perform as designed during events. This finding was more than minor since it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and could affect the cornerstone objective of ensuring the availability, reliability, and capability of the charging pumps. The issue was considered to be of very low safety significance (Green) based on a Phase 1 evaluation of the Significance Determination Process (SDP) since there was indirect evidence that the lube oil system functioned properly and, therefore, no actual loss of safety function. The issue was determined to be a non-cited violation (NCV) of 10CFR 50, Appendix B, Criterion XI, Test Control.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Feb 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Test a Safety-Related Design Function of the Charging Pumps Minimum Flow Bypass Line Valves**

The inspectors identified that the licensee had not established a procedure to test a safety-related design function of the charging pump minimum flow bypass line valves (CS-V-196 & 197). Specifically, the licensee did not test the automatic function of the valves to reopen to provide recirculation flow and charging pump protection at the low flow setpoint. This finding was more than minor since it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and could affect the cornerstone objective of ensuring the availability, reliability, and capability of the charging pumps. This issue was considered to be of very low safety significance (Green) based on a Phase 1 evaluation of the SDP because some previous calibration data and valve stroke testing results provided evidence of proper valve operation, and there was no actual loss of safety function. This finding was determined to be a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XI, Test Control.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Oct 04, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Perform an Adequate Calculation of Emergency Core Cooling System (ECCS) Pump Suction Piping Void Migration because of Mathematical and Assumption Errors.**

A non-cited violation of 10 CFR Appendix B, Criterion III, "Design Control," for failure to identify calculation errors regarding air void acceptance criteria for emergency core cooling piping. The calculation errors resulted in an incorrect conclusion that air voids in charging and safety injection pump suction piping high points would not likely be entrained in system flow. This issue was more than minor because the incorrect conclusion could reasonably be viewed as a precursor to a more significant event affecting the mitigating systems cornerstone. Specifically, the void limits were based on engineering judgement rather than a technical assessment of charging and safety injection pump performance with void entrainment in the system flow. However, the issue was determined to have very low safety significance in accordance with Phase I of the SDP. The availability of the pumps was never affected because the procedural acceptance criteria limited the detectable air void volumes to a point that performance would not have been degraded.

Inspection Report# : [2002011\(pdf\)](#)

**Significance:**  Sep 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate Corrective Actions and Extent of Condition Reviews for Two Hot Connections Found in the Emergency Diesel Generator Control Panel**

The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI "Corrective Action," in that corrective actions were not adequate for degraded electrical connections found on rectifier bank #1 for the "B" Emergency Diesel Generator (EDG) in October 2001. The degraded rectifier bank connections were characterized as "serious" by industry standards for thermography and required prompt corrective maintenance. The licensee's corrective actions did not adequately evaluate whether the cause was applicable to rectifier bank #2. In July 2002, during troubleshooting efforts for problems with the "B" EDG, two additional "serious" hot connections were discovered on rectifier bank #2. The finding was considered more than minor because if the finding was left uncorrected, the degraded connections could have degraded further and impacted the reliability of the EDG. The finding was determined to be of very low safety significance (Green) since the hot connections did not result in an actual failure of the EDG. Because the finding is of very low safety significance and the finding was captured in the licensee's corrective action program, this finding is being treated as a Non-Cited Violations, consistent with Section VI.A.1 of the NRC Enforcement Policy.

Inspection Report# : [2002005\(pdf\)](#)



**Significance:** Aug 09, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Test the "A" Emergency Diesel Generator (EDG) within 24-hours of the failure of the "B" EDG as required by Technical Specification 3.8.1.1, action b**

A violation of Technical Specification 3.8.1.1 associated with the failure to test the "A" emergency diesel generator (EDG) within 24 hours of the "B" EDG being declared inoperable. The issue was entered in the corrective action system as CR 02-11795. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. The finding is more than minor since failure of the emergency diesel generator could affect the mitigating system cornerstone. The risk of this finding is determined to be of very low safety significance because the mitigating function of the EDG system was not lost since "A" EDG remained operable during the period of time that the "B" EDG was unavailable.

Inspection Report# : [2002010\(pdf\)](#)



**Significance:** May 25, 2002

Identified By: NRC

Item Type: FIN Finding

**Inadequate Implementation of Work Controls Resulted in an Unexpected Loss of Two Annunciator Panels**

The operators unexpectedly lost two of six hard wired annunciators in the control room due to breakdowns in the work control process including ineffective communications and insufficient review of the work document. The annunciator panels were quickly returned to service. The inability to recognize the impact of work on plant equipment and specifically the annunciator system could lead to a more significant event. The annunciator system provides operators important information to identify and respond to plant transients and equipment problems. Since the annunciators were lost for a short period of time and operability of mitigating equipment trains was not affected, the risk associated with this issue was determined to be of very low safety significance. The inspectors did not identify any violations of NRC requirements.

Inspection Report# : [2002003\(pdf\)](#)



**Significance:** May 25, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Follow Work Control Procedures for Work Order Changes Associated With an Emergency Diesel Generator**

The licensee performed an unauthorized change to a work order associated with an addition of a diode to the motor-operated potentiometer (MOP), which is part of the electrical governor control system for the "B" emergency diesel generator (EDG). This change did not receive the required reviews. The result was a surge on the input devices to the MOP and a subsequent aborted maintenance run of the EDG. Engineers, mechanics, and management reviews did not identify an additional problem caused by surge in the system prior to the maintenance run. The failure to follow procedures for the control of maintenance activities was a Non-Cited Violation of Technical Specification 6.7.1.a.

Inadequate control of maintenance activities on risk significant safety-related equipment could lead to a more significant event and could affect the reliability and availability of mitigating equipment. Using the shutdown operations significance determination process, the inspectors determined the finding was of very low significance.

Inspection Report# : [2002003\(pdf\)](#)



**Significance:** Apr 17, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Corrective Actions Resulted in Air Intrusion in the "A" Emergency Diesel Generator Lubrication Oil System**

On April 17, 2002, following maintenance activities, the licensee experienced an air intrusion event into the "A" emergency diesel generator (EDG) lubrication oil system. The inspectors identified that the licensee had inadequate corrective actions to prevent reoccurrence of air intrusion in the EDG lubrication oil system. A prior air intrusion event caused the December 2000 failure of the "B" EDG. This finding affected the mitigating systems cornerstone because it increased the probability for disrupting oil flow to the "A" EDG main bearings which could have resulted in failure of the EDG, impacting the reliability of the "A" EDG. The finding was determined to be of very low safety significance (GREEN), since the air intrusion into the lubricating oil system did not result in damage to the "A" EDG. The failure to implement effective corrective actions was a Non-Cited Violation of 10 CFR 50, Appendix "B", Criterion XVI, "Corrective Action."

Inspection Report# : [2002004\(pdf\)](#)

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## **Barrier Integrity**

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## **Emergency Preparedness**

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## **Occupational Radiation Safety**

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## **Public Radiation Safety**

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## Physical Protection

**Significance:**  Sep 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Maintain Safeguards in Accordance with 10 CFR 73.55(b.1.i.) and the Licensee's Security Plan (Security Officer Inattentive to Duty)**

An in-office review by Region I security specialists identified a non-cited violation of 10 CFR 73.55(b.1.i) and the requirements of Seabrook Physical Security Plan. On July 25, 2002, a member of the Security Response Force failed to respond to an intrusion alarm and was subsequently found inattentive while on duty. Failure of the response force member to respond to the intrusion alarm in a manner to assure conformance with the requirements of the Seabrook Station Physical Security Plan and Procedures was determined to have very low safety significance using the Interim Physical Significance Determination Process. The finding involved a vulnerability of Safeguards Systems or Plans, but no actual intrusion occurred and there have not been more than two similar findings in the past four quarters.

Inspection Report# : [2002005\(pdf\)](#)

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## Miscellaneous

**Significance:**  Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Corrective Action**

10 CFR 50 Appendix "B", Criterion XVI "Corrective Action" requires conditions adverse to quality shall be promptly identified and corrected. Contrary to the above, Seabrook failed to implement timely corrective actions to address operators' knowledge involving inoperability of Power Operated Relief Valves (PORVs). Consequently, licensed operators were not fully aware the PORVs become inoperable during performance of the wide range RCS cold leg temperature surveillance testing. The finding was determined to be of very low safety significance because the actual loss of the PORVs' safety function was less than the one hour T.S. allowed outage time and it was captured in Seabrook's corrective action program (CR 03-00688, CR 03-00721, CR 03-02858).

Inspection Report# : [2003002\(pdf\)](#)

Last modified : May 30, 2003